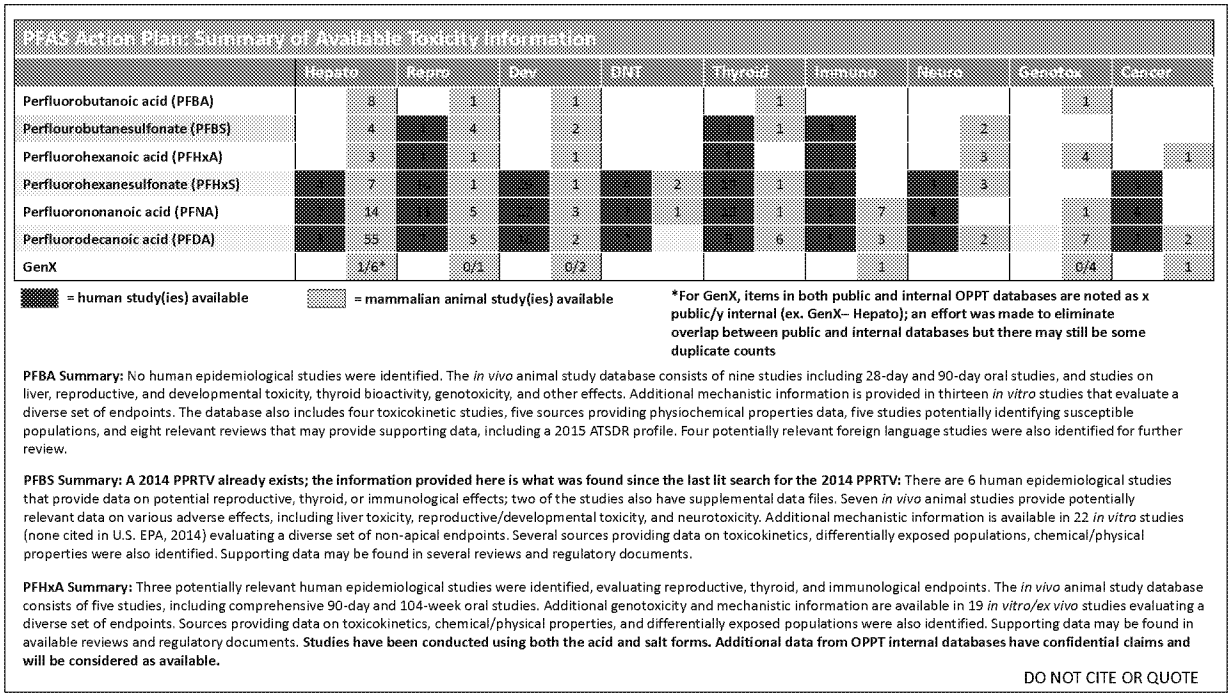

***For GenX, items in both public and internal OPPT databases are noted as x public/y internal (ex. GenX– Hepato); an effort was made to eliminate overlap between public and internal databases but there may still be some duplicate counts**

PFBA Summary: No human epidemiological studies were identified. The *in vivo* animal study database consists of nine studies including 28-day and 90-day oral studies, and studies on liver, reproductive, and developmental toxicity, thyroid bioactivity, genotoxicity, and other effects. Additional mechanistic information is provided in thirteen *in vitro* studies that evaluate a diverse set of endpoints. The database also includes four toxicokinetic studies, five sources providing physiochemical properties data, five studies potentially identifying susceptible populations, and eight relevant reviews that may provide supporting data, including a 2015 ATSDR profile. Four potentially relevant foreign language studies were also identified for further review.

PFBS Summary: A 2014 PPRTV already exists; the information provided here is what was found since the last lit search for the 2014 PPRTV: There are 6 human epidemiological studies that provide data on potential reproductive, thyroid, or immunological effects; two of the studies also have supplemental data files. Seven *in vivo* animal studies provide potentially relevant data on various adverse effects, including liver toxicity, reproductive/developmental toxicity, and neurotoxicity. Additional mechanistic information is available in 22 *in vitro* studies (none cited in U.S. EPA, 2014) evaluating a diverse set of non-apical endpoints. Several sources providing data on toxicokinetics, differentially exposed populations, chemical/physical properties were also identified. Supporting data may be found in several reviews and regulatory documents.

PFHxA Summary: Three potentially relevant human epidemiological studies were identified, evaluating reproductive, thyroid, and immunological endpoints. The *in vivo* animal study database consists of five studies, including comprehensive 90-day and 104-week oral studies. Additional genotoxicity and mechanistic information are available in 19 *in vitro/ex vivo* studies evaluating a diverse set of endpoints. Sources providing data on toxicokinetics, chemical/physical properties, and differentially exposed populations were also identified. Supporting data may be found in available reviews and regulatory documents. **Studies have been conducted using both the acid and salt forms. Additional data from OPPT internal databases have confidential claims and will be considered as available.**

DO NOT CITE OR QUOTE

PFHxS Summary: Eighty potentially relevant human epidemiological studies were identified; the majority (>40) focus on reproductive and developmental toxicity. Additional studies evaluate liver, thyroid, immunological, and neurological toxicity, as wells as cancer and other health effects. The *in vivo* animal study database consists of twelve studies primarily focused on liver, thyroid, reproductive, developmental, and neurological toxicity. Additional mechanistic information is provided in eighteen *in vitro* and two *in ovo* studies that evaluate a diverse set of endpoints. Other potentially relevant studies include thirty-one ADME studies, one PBPK modeling study, forty-six studies that may provide data on susceptible populations, and five sources reporting chemical/physical properties.

PFNA Summary: Ninety-four potentially relevant human epidemiological studies were identified with the largest number of studies focused on reproductive and developmental toxicity. Additional studies evaluate liver, thyroid, immunological, and neurological toxicity, as wells as cancer and other health effects. The *in vivo* animal study database consists of thirty-one studies primarily focused on liver, reproductive, developmental, and immunological toxicity. Additional mechanistic information is provided in thirty-eight *in vitro/ex vivo/in silico* studies that evaluate a diverse set of endpoints. Other potentially relevant studies include twenty-five toxicokinetic studies, thirty-nine studies that may provide data on susceptible populations, and several sources reporting chemical/physical properties. Supporting data may be found in twelve available reviews and regulatory documents.

PFDA Summary: Forty potentially relevant human epidemiological studies were identified, evaluating liver, reproductive, developmental, developmental neurology, immunological, and neurological toxicity as well as thyroid, cancer and other effects. The *in vivo* animal study database consists of eighty studies on similar endpoints, also including genotoxicity studies. Additional mechanistic information is provided in fifty-four *in vitro/ex vivo/in silico* studies that evaluate a diverse set of endpoints. The database also includes twenty-six toxicokinetic studies, twenty-three studies potentially identifying susceptible populations, and fourteen relevant reviews that may provide supporting data. Chemical/physical properties are reported in five sources. Eleven potentially relevant studies with no abstracts are included for further review.

GenX Summary: The public database for GenX is limited but there are additional studies in OPPT internal databases. In the public domain, there are two studies of potential utility for human health risk assessment purposes; A 2-year oral study in rats that examined chronic non-cancer and cancer effects, and a 28-day oral study in mice focused exclusively on Immunotoxicity. There is also a toxicokinetic study in rats, mice, and monkeys, and three sources containing information on chemical/physical properties. There are additional studies (e.g., additional toxicokinetic studies and 28- and 90-day studies in mice and rats) and original studies underlying the published literature available in OPPT internal databases. Studies have been conducted on both the acid and ammonium salt forms of the compound.